

DRAFT 7
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NAO 217-103
Management of NOAA Small Boats

SECTION 1. PURPOSE.

.01 This Order establishes National Oceanic and Atmospheric Administration (NOAA) policy for management and operation of boats less than 300 gross tons.

.02 This Order establishes minimum standards and required inspections to be followed by all NOAA activities operating boats.

.03 This Order provides policy and guidance for NOAA activities to conduct risk assessments and to develop operational risk management plans for marine operations.

SECTION 2. BACKGROUND.

Operating small craft in support of marine research involves unique associated risks. Many NOAA Line Offices rely on small boats to achieve mission requirements. There is a myriad of regulatory standards that address motorboat safety, but little guidance or regulation tailored specifically to the special employment of small research vessels less than 300 gross tons. Current marine standards are derived from international conventions, lessons learned from casualties, and advances in technology. As such, the body of regulatory information continues to grow and change. All vessels owned by NOAA are considered public vessels and therefore exempt from regulatory oversight by the United States Coast Guard. It is NOAA's intent, as stewards of the Nation's oceans and atmosphere, to comply with, or exceed, all applicable regulatory and industry standards and to foster a management culture committed to safe and environmentally sound boat operations based upon the principles of operational risk management.

SECTION 3. DEFINITIONS.

.01 Acquisition. Gain ownership of things with out monetary cost.

.02 Alteration and Repair of Small Boats.

a. Alteration or Modification. Any addition, deletion, and/or change to the original, as delivered, configuration of a boat, especially with regard to its hull, propulsion, electronic, navigation,

communication, mission, structural, mechanical, and electrical systems that affect weight, performance, stability, outfitting, layout, capabilities, and safety.

b. Significant Alteration or Modification. An addition, deletion, and/or change to the original, as delivered, configuration of a boat, with regard to its hull, mechanical, and electrical systems that affect displacement, stability, length overall, or safety. Examples of a significant alteration or modification include, but are not limited to; the addition of superstructure and/or winches for fishing operations, the addition of any weight handling gear (A-frame, crane, articulated boom), replacement of propulsion engines, installation of generators, or lengthening of a vessel.

c. Repair. A restoration of a boat's original configuration or capability that is necessary because of wear and/or failure of its systems and equipment. A repair involving a one-for-one replacement of a component with a different brand or design may be considered an alteration if there is an element of risk or uncertainty with regard to the affects outlined in Section 3.02.a.

.03 Boat. As used in this Order refers to all craft propelled by any means and capable of being used on a body of water, but does not include sea planes.

.04 Gross Tonnage. A uniform method of measuring vessels frequently used for regulatory applications. Gross tonnage is calculated by the formula: $((L \times B \times D) \times 0.67) \div 100$, where L is registered length, B is maximum moulded beam, D is depth of vessel from the upper most continuous deck to the deepest section of the keel.

.05 Length Overall. The length of a boat, measured in feet, from the after most integral portion of the hull to the forward most integral portion of the hull.

.06 Motorboat. As used in this Order, refers to all craft propelled by machinery and capable of being used on a body of water, but does not include sea planes.

.07 Motorboat Classifications. NOAA motorboat classifications are developed from USCG definitions for motorboats, and apply to all boats propelled by machinery, as follows:

- a. Class A - Less than 16 feet overall length;
- b. Class I - 16 feet but less than 26 feet;
- c. Class II - 26 feet but less than 40 feet;

d. Class III - 40 feet but not more than 65 feet;

e. Small Research Vessel (SRV) - Greater than 50 gross tons, but less than 300 gross tons and capable of conducting 24 hour operations.

.08 Operational Risk Management. A process involving several steps outlined in Appendix I of this Order. Operational risk management entails an examination of hazards and associated controls to reduce risk to personnel, vessels, environment, mission, or any stakeholder in NOAA operations.

.09 Procurement. Purchase by means of exchanging money for things.

.10 Program Manager. A government employee in charge of, and having oversight over, a specific mission, activity, or scientific investigation at a Line Office field location. Examples of Program Managers include Chiefs of Fishery Ecology, Chief of Habitat Restoration, Chief of Ocean Chemistry.

.11 Qualified Motorboat. A motorboat, sufficiently complex in terms of design or operations, to require an individualized Vessel Operations Manual.

.12 Responsible Person. A government or contract employee who should be involved in the routine oversight and/or operation of boats. Examples of Responsible Persons include, but are not limited to, marine superintendents, port captains, field operations managers, captains, boat operators, or boat maintenance staff.

.13 Senior Field Manager. A government employee in charge of and having responsibility for all boat operations conducted at a field unit or activity. Examples of Senior Field Managers include Laboratory Directors, Sanctuary Managers, Small Research Vessel Captains, or Field Party Chiefs. The Program Manager and Senior Field Manager may be the same person.

.14 Vessel. See boat.

.15 Vessel Operations Manual (VOM). An operational risk management plan consisting of a compilation of instructions, guidelines, and regulations derived from the operational risk management process, intended to promulgate specific requirements and instructions for Small Research Vessels, Class III motorboats, and qualified Class II motorboats.

.16 Vessel Policy (VP). An operational risk management plan consisting of a compilation of instructions, guidelines, and regulations derived from the operational risk management process

intended to promulgate management and safety policy applicable to all boats at a given Line Office field activity.

SECTION 4. SCOPE AND RESPONSIBILITY.

.01 Boats normally carried aboard NOAA Ships as part of the ship's equipment or outfitting are under the direct control and management of the Office of Marine and Aviation Operations (OMAO). These boats are subject to the safety standards contained in various OMAO Instructions including 5100.1B change 1.0 Safety Standards for Ships of the NOAA Fleet.

.02 Line Offices shall be responsible for:

- a. the safe operation, inspection compliance, life cycle management, and maintenance of boats owned, operated or under the direct operational control of the Line Office field activity;
- b. committing resources dedicated solely to boat operations to ensure compliance with requirements of this Order; and
- c. developing Program Vessel Policy and/or Vessel Operations Manuals for all boats owned, operated, or under the direct organizational control of their respective programs.

.03 OMAO shall be responsible for:

- a. serving as principal advisor or technical point of contact on an as-needed basis for operational, maintenance, or regulatory standards as it relates to policy and procedures set forth by this Order;
- b. implementing an inspection system based on applicable marine safety standards;
- c. managing a database containing an inventory of vessels;
- d. providing advice and guidance to Senior Field Managers during the development of operational risk management plans;
- e. assisting Line Office field activities, to the extent that resources allow, with marine engineering, electronics, procurement, acquisition, or regulatory interpretation support.

.04 OMAO and Line Offices are responsible for fostering a corporate culture which shall value the boat operator, encourage the sharing of information, seek a quality approach, share commitment, and manage risk in order to achieve safe boat operations and environmental stewardship.

SECTION 5. MOTORBOAT PROCUREMENT, ACQUISITION AND ALTERATION.

.01 Procurement of Motorboats.

a. The Senior Field Manager shall evaluate the suitability of a proposed motorboat, or design, in relation to operational requirements as it pertains to safety and environmental compliance prior to initiating a motorboat procurement.

b. The Senior Field Manager shall notify the OMAO Small Boat Coordinator when a proposed motorboat:

1. will require significant alteration after delivery to meet mission requirements; or

2. is built to Government furnished specifications.

c. When a motorboat meets the criteria of Section 5.01b, the Senior Field Manager shall ensure that contract specifications are written or reviewed by either an OMAO Small Boat Engineer, a qualified marine engineer, or naval architect. The review shall examine the resultant craft to ensure that it will be properly configured with respect to safety systems, stability, mission capabilities, sound marine engineering practices, environmental compliance, and Appendix IV of this Order, NOAA Small Boat Visual Identification and Numbering.

d. Senior Field Managers may exempt Class A, I, or II motorboats from the requirement to conduct a risk assessment prior to procurement when:

1. the risk factors for the motorboat to be procured are already addressed or known from previous experience; or

2. when the rapid procurement of the motorboat is deemed essential to the successful completion of a time critical mission.

.02 Acquisition of Motorboats. Prior to completing acquisition (for example, no-cost property transfer) of a motorboat, the Senior Field Manager shall:

a. evaluate the potential safety and environmental implications of the motorboat as it relates to ownership, operation, and eventual disposal;

b. conduct a survey to assist in the evaluation required in Section 5.02a for all:

1. qualified Class II motorboats;
2. Class III motorboats; and
3. Small Research Vessels.

The survey shall determine the cost and extent of modifications or repairs needed to deliver the motorboat to a satisfactory operating condition for the intended service; and

c. maintain any records resulting from the above evaluation, risk assessment, or survey.

.03 Alteration and Repair of Motorboats.

a. All alterations to NOAA motorboats shall be reviewed by the Program Manager or Responsible Person to assess their potential impact on safety (i.e., firefighting and lifesaving capabilities), watertight integrity, and stability. The OMAO Small Boat Coordinator is available to advise Senior Field Managers or Responsible Persons when doubt exists concerning potential impacts.

b. Alterations and repairs shall be performed in accordance with the more stringent applicable standards or regulations promulgated by:

1. Code of Federal Regulations;
2. United States Coast Guard;
3. American Boat and Yacht Council;
4. American Bureau of Shipping;
5. Maritime industry common practice or standards;
6. American Welding Society; or
7. Institute of Electrical and Electronics Engineers.

c. For all significant alterations, or if uncertainty exists regarding a repair, Senior Field Managers or Responsible Persons shall seek marine engineering services through either OMAO or a qualified marine engineer to develop the description of work, and to oversee and approve contract fulfillment.

d. Line Offices are encouraged to follow the routine repair and maintenance standards promulgated by the American Boat and Yacht Council in the manual Standards and Technical Information Reports for Small Craft and the book Boatowner's Manual and Electrical

Manual. These publications are excellent sources of guidance for the general maintenance and repair of boats.

e. Records resulting from the alteration of motorboats shall be maintained at the appropriate Line Office field activity.

f. Any alteration to a SRV, Class III motorboat, or qualified Class II motorboat which results in a redistribution of weight greater than 2% of the total vessel displacement tonnage requires prior review by OMAO or a qualified naval architect. The 2% weight distribution is a guideline which shall be a cumulative total maintained over the life of the motorboat.

SECTION 6. OPERATION OF BOATS.

.01 Operational Risk Management Plans. Every NOAA activity that operates boats shall develop operational risk management plans. Operational risk management plans shall entail the development and promulgation of either a Program Vessel Policy, a Vessel Operations Manual(s), or both. These plans shall be based on an evaluation of operational risks to personnel, vessel, environment, and mission.

a. Vessel Operations Manual. Senior Field Managers, in consultation with their designated Responsible Person(s), shall develop a Vessel Operations Manual (VOM) for each SRV, Class III motorboat, and qualified Class II motorboat owned, operated or under their direct organizational control. The VOM shall address the findings that result from Section 6.01 of this Order. A hypothetical VOM is included in Appendix I to this Order.

b. Program Vessel Policy. Senior Field Managers, in consultation with their designated Responsible Person(s), shall develop a comprehensive Program Vessel Policy. In addition to addressing the policies and procedures promulgated by this Order, the Program Vessel Policy shall be tailored to address the inherent risks and specific regional issues common to all boats operated by a field activity regardless of classification. A sample Program Vessel Policy is included as Appendix II to this Order.

.02 Float Plans.

a. All use of NOAA motorboats shall be documented by a float plan given prior to departure which lists, as a minimum:

1. the vessel name;
2. date and time of departure;

3. intended destination or working area;
4. estimated date and time of return or arrival;
5. number of persons on board.

Other significant facts may be included as desired.

b. The boat operator shall tender the plan, prior to departure, to a rational person on shore as follows:

1. for voyages of less than twelve (12) hours, the plan may be given verbally; or
2. for voyages of greater than twelve (12) hours duration, the plan must be written and shall establish a tracking and communications procedure that requires the boat to report its position and operations at least daily.

The rational person on shore shall be able to determine whether a vessel is overdue for arrival and take appropriate action to either determine the location of the vessel or initiate emergency response.

.03 Emergency Contacts. Senior Field Managers, or Program Managers, shall ensure that a 24-hour, 7 day per week, emergency contact system is in place for all boat operations.

.04 Pre-Cruise Testing of Safety Equipment. Operators of boats equipped with electronic safety equipment, such as an EPIRB, shall conduct monthly operational tests of the unit. In addition, the Responsible Person shall verify that the assigned beacon identification number contains valid emergency contact information.

.05 Transportation of Passengers. When prearranged and approved by Senior Field Managers, or their designee, non-mission critical personnel such as members of the media, guests, VIPs, or service organizations may be transported on NOAA boats as passengers. Approvals will be granted only in those instances where it is found to be clearly in the interest of the Government, and, only when such boats are being used for official purposes and such passengers will not interfere with NOAA operations. The boat operator may authorize passage in emergencies involving the protection of life and property.

.06.06 Good Marine Practice. All NOAA boats shall be operated in a safe and courteous manner, and maintained in a seaworthy condition.

.07 Operator Training and Certification. All operators of NOAA boats shall be appropriately trained and certified based on boat size, engineering complexity, and nature of operations. Senior Field

Managers shall use their discretion in administering additional operator training and certification requirements. At a minimum, the following training requirements apply:

a. NOAA Class III Motorboats and Small Research Vessels

1. Commissioned or Warrant Officers of the Uniformed Services who have qualified as Officer of the Deck (Underway) and who have exercised this qualification during the past five (5) years may be considered as having qualifications equivalent to the USCG licensed operators.

2. Other than officers mentioned in Section 6.09a.1. of this Order, all designated operators must possess a valid USCG license for the service intended.

b. NOAA Class A, I, or II Motorboats. Operators of NOAA Class A, I, or II motorboats shall obtain qualification by participation in either:

1. USCG Auxiliary;

2. U.S. Power Squadron (USPS);

3. US Department of the Treasury Marine Law Enforcement Training Program; or

4. equivalent USCG or OMAO approved boat operator training course.

c. CPR and First Aid Training. All boat operators shall have current Red Cross or equivalent certification in cardiopulmonary resuscitation (CPR) and First Aid.

d. Marine Weather Training. Senior Field Managers and all boat operators are advised that the National Weather Service can provide marine weather training seminars for NOAA field activities upon request.

.08 Accident Reporting and Investigation.

a. Programs shall follow all existing policy regarding the reporting of accidents.

b. Senior Field Managers shall notify OMAO of a motorboat accident or incident when it involves any of the following:

1. unintentional grounding for greater than 24 hours;

2. explosions;
3. sinking;
4. fire;
5. collisions involving breach of hull integrity;
6. any incident involving a motorboat which results in damage in excess of \$10,000 by or to the motorboat, its systems or its equipment;
7. incapacitating injury requiring professional medical attention, hospitalization for greater than 72 hours, or loss of life of any person;
8. unintentional and extensive flooding; or
9. discharge of oil or any substance capable of producing a sheen upon the water.

c. When an accident meets the above criteria and the cause of such an accident is not clearly evident, the Line Office shall convene an investigation. Findings and recommendations from the investigation shall be made available to the Senior Field Manager, Program Manager, OMAO, OMAO Small Boat Coordinator and OMAO Small Boat Engineer.

d. Lessons learned from the accident and findings of the subsequent investigation shall be distributed to the NOAA small boat user community and shall keep the identity of the NOAA Line Office, field activity, and associated personnel anonymous.

SECTION 7. INSPECTION OF MOTORBOATS.

.01 General. Inspection of NOAA motorboats is intended to promote safe operations through identification of deficiencies in complying with applicable regulation, material condition, prudent seamanship, and good marine practice.

.02 Inspection Criteria.

a. General. SRV, Class III motorboat, and qualified Class II motorboat inspection criteria will be determined by OMAO, with Program involvement, based on operational risk management plans developed in accordance with Appendix I of this Order. Minimum inspection criteria for all motorboats are presented in Appendix III to this Order.

b. Safety, Fire Fighting, and Life Saving. The minimum safety, fire fighting, and life saving equipment requirements for motorboats are derived from USCG regulations for recreational vessels and are located in Table 1 to Appendix III of this Order. Supplemental equipment may be required by an operational risk management plan, or at the discretion of the Senior Field Manager, Program Manager or Responsible Person.

c. Communications and Navigation. The minimum communications and navigation equipment requirements for boats are based on the distance from shore that the motorboat will operate and are located in Table 2 to Appendix III of this Order. Supplemental equipment may be required by an operational risk management plan, or at the discretion of the Senior Field Manager, Program Manager, or Responsible Person.

SECTION 8. SMALL BOAT IDENTIFICATION AND NUMBERING.

.01 General. A uniform identification scheme is necessary to develop and promote public recognition of NOAA small boat activities in the coastal environment. A uniform numbering scheme is required by United States Code.

.02 Compliance Guidelines. Visual identification and numbering requirements are provided in Appendix IV to this Order.

SECTION 9. SMALL BOAT PROGRAM WEBSITE.

.01 General. A Small Boat Program web site shall be maintained to promote the exchange of safety management best practices and methods, serve as a pool of corporate knowledge, and provide training, engineering, and operational support resources to the NOAA small boat user community.

.02 Address. The small boat program website shall be located on the World Wide Web at the following address: <http://www.sbp.noaa.gov/>

SECTION 10. RECORDS MANAGEMENT.

.01 Inspection Reports. Maintained by OMAO.

.02 Operational Risk Management Plans. Maintained by Line Offices. Copies shall be filed with OMAO.

.03 Risk Assessment Records. Records from risk assessments, including but not limited to risk assessments conducted during the procurement, acquisition, or alteration of motorboats, or during the development of

operational risk management plans shall be maintained at the Line Office field activity, and shall be available for review during inspection periods.

.04 Alteration Records. Engineering documents or drawings from all alterations to motorboats shall be maintained at the Line Office field activity and shall be available for review during the inspection process.

.05 Operator Training Records. Operator training and certification records shall be maintained at the Line Office field activity and shall be available for review during inspection process.

.06 Boat Inventory. Boat inventories and hull registry number assignments shall be maintained by OMAO.

SECTION 11. REFERENCES.

The following references were used in the development of this Order and Appendices:

- .01 The Motor Boat Act of 1940;
- .02 The Federal Boat Safety Act of 1971 (46CFR24 Subchapter C - Uninspected Vessels);
- .03 Commercial Fishing Vessel Safety Act of 1988 (46CFR188);
- .04 46CFR4.03-1 (Marine Casualty or Accident)
- .05 46CFR175-187 (Subchapter T - Small Passenger Vessels Under 100 gross tons);
- .06 46CFR188-196 (Subchapter U - Oceanographic Research Vessels);
- .07 46CFR125-136 (Subchapter L - Offshore Supply Vessels);
- .08 OMAO Instruction 4720.2B;
- .09 OMAO Instruction 4790.1B;
- .10 OMAO Instruction 9820B;
- .11 OMAO Instruction 5100.1B, Change 1.0;
- .12 UNOLS Small Research Vessel Compendium;
- .13 NOAA Motorboat Inspection Program Guidelines;

- .14 Florida Keys National Marine Sanctuary Vessel Policy Manual.
- .15 USCG Risk Based Decision Making World Wide Web Site
- .16 American Boat and Yacht Council, Standards and Technical Information Reports for Small Craft .
- .17 American Boat and Yacht Council, Rules and Regulations for Recreational Boats .
- .18 USCG Risk Based Decision Making Web Site,
<http://www.uscg.mil/hq/g-m/risk/index.html>
- .19 OPNAVINST 3500.39A/MCO 3500.27A, INTRODUCTION TO OPERATIONAL RISK MANAGEMENT (ORM)
- .20 UNOLS Small Research Vessel Compendium
- .21 UNOLS Final Report of The Workshop onScientific Shipboard Diving Safety
- .22 U.S. Geological Survey Manual, 412.1 - Watercraft, 1/22/90
- .23 SM 445-2-H, USGS Occupational Hazards and Safety Procedures Handbook, April 2000, Chapter 16 - Water Craft Safety

SECTION 12. EFFECT ON OTHER ISSUANCES.

This Order supersedes NOAA Administrative Order (NAO) 217-103 dated 06/20/91.

Attachments:

- Figure 1.0 Administrative InteractionFlow Chart
- Appendix I - NOAA Small Boat Operational Risk Management
- Appendix II - Sample Program Vessel Policy
- Appendix III - NOAA Motorboat Inspection
- Appendix IV - NOAA Small Boat Visual Identification and Numbering